

New European Chemicals Policy Overhaul begins to take the handle off the toxics pump.

The European Union (EU) recently issued new regulations requiring chemical firms to develop health and environmental data on chemicals used to make everyday products and provide reasonable assurances of safety. What a novel concept. The sad truth is that it is.

Despite the fact that most public surveys find that people believe (and expect) industrial chemicals are regulated like drugs (governments would never allow companies to place a dangerous, untested chemical into their products, would they?), most government toxics policies, do not follow this expectation. Until now that is...

In Mid-December the European Parliament and Council of Ministers (the EU Member State governments) announced agreement on a broad set of requirements overhauling chemicals regulation in the now 27 nation block (EU). This new EU chemicals strategy is called REACH standing for **R**egistration, **E**valuation, and **A**uthorization of **C**hemicals (click [here](http://www.chemicalspolicy.org/downloads/UpdateDec2006_000.pdf) - http://www.chemicalspolicy.org/downloads/UpdateDec2006_000.pdf - for a description of the final agreement and here for links to the actual text - <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:396:0001:0849:EN:PDF>)

When it comes into force on 1 June 2007 REACH will require each manufacturer and importer of industrial chemicals in Europe (or products containing them) to do the following:

- Register all chemicals used over one metric ton per year per manufacturer or importer (M/I) - upwards of 30,000 chemicals. This includes submitting chemical information (production volumes, uses) and safety data. For the vast majority of chemicals (used under 10 metric tonnes per year) these data requirements should be easy - basic chemical properties that a company would need to know to not blow up their factory - although more is needed for those substances thought to be highly dangerous. For those chemicals used over 10 metric tons per year per M/I, companies will have to submit more detailed safety data, including testing proposals in many cases, with those requirements increasing with production or import volume. They will also have to complete what is called a Chemical Safety Report (CSR), which must identify the majority of uses of the chemical, identify potential risks, and recommend controls measures so that the chemical can be used safely.

The CSR will require that manufacturers communicate with their supply chains to understand how and where their chemicals are being used. This may seem commonsense, but it turns out that data on how chemicals are used is surprisingly sparse.

These data will be submitted to a new European Chemicals Agency (ECHA) in Helsinki which will compile the data into an Internet portal which will allow non-confidential data to be accessed by people all over the world.

- For chemicals of very high concern, those that are carcinogenic, mutagenic, reproductive toxicants, persistent and bioaccumulative toxics, or just plain very persistent and very bioaccumulative, and with effects considered to be of an equivalent concern, firms may need to seek Authorisation for each continued use. This includes companies that incorporate such chemicals into products - applying to a list of upwards of 1500 chemicals. Chemicals will be drawn off this list and subjected to the authorisation process as resources allow. To obtain a time-limited authorisation firms will need to show that the chemical can be used safely, and that there are no viable alternatives, or that there is a socio-economic necessity for its continued use. For chemicals that are persistent and bioaccumulative, firms will only be able to obtain authorisation for socio-economic reasons, because regulators believe that mistakes made with chemicals that persist or build up in our environment stick around for along time. For other chemicals, to obtain authorisation firms will have to submit a substitution plan, outlining steps they will take to find suitable alternatives in the future.

REACH has many other features, most notably its Evaluation and Restrictions components. Authorities of the EU Member States will review substances that are potentially of high concern to determine whether additional testing is needed or restrictions are warranted. Registration dossiers will also be evaluated to ensure that the information provided and used is in compliance with the detailed requirements. For chemicals the authorities believe pose a risk that need to be better controlled (or even banned), they will have the authority to issue Restrictions on an expedited timeline. (more on REACH can be found at the Lowell Center's Chemicals Policy Website, <http://www.chemicalspolicy.org>)

REACH is revolutionary. It responds to a set of problems that are similar on this side of the pond (see recent debate piece in Chemical and Engineering News that outlines these problems <http://pubs.acs.org/cen/government/85/8502regulation.html>)

Lack of toxicity and use data on most chemicals in commerce. Despite assurances that this problem has been solved by the chemical industry through its voluntary High Production Volume Chemicals Program (compiling screening data on chemicals used over one million pounds per year), the program doesn't include the thousands of chemicals used under this threshold which likely pose risks to health and environment, and the data required are limited for decision-making.

Lack of regulation of most chemicals in commerce. When our national toxics legislation, the Toxics Substances Control Act, came into effect in 1979, legislators made the mistake of making all chemicals on the market at that time “grandfathered”, assumed safe until proven dangerous. To regulate these 99% by volume of chemicals on the market today, EPA must demonstrate that the chemical presents an unreasonable risk – that its toxic, costs of regulation outweigh the benefits and that they have chosen the least burdensome option to reduce risks to “acceptable” levels. You might ask, for how many chemicals has EPA been able to reach this threshold. The answer is less than 10 in 30 years. When EPA went to ban asbestos after 10 years and 10,000 pages of public record, their decision was overturned in the courts. EPA hasn’t tried since.

Lack of innovation. There is little incentive to use safer chemicals if the more dangerous ones aren’t regulated. While many new chemicals have come through EPA’s new chemicals review process few have gone on to reach market prominence. EPA has undertaken pioneering work in working with industry to design safer chemicals and products, through its Design for Environment and Green Chemistry efforts. However, despite being lauded by industry and advocates alike, they are woefully underfunded compared to traditional data collection efforts. Only when our government provides the needed market drivers, can the development of safer chemicals become the norm rather than the exception.

Build up of chemicals in us and the impacts. Study after study in recent years indicate the extent to which we are all contaminated with toxic chemicals beginning in the womb. And nearly every day a new study identifies impacts of this contamination on health and environment. The chemical industry likes to state that this is just about better detection. I would argue that it indicates how inadequate current policies are and how bad chemical design has been to date. We should take a lesson from the current public rally to act to respond to global warming. Instead of arguing for another 10 years about whether or not toxic chemicals are harming people and the environment, let’s take action now. Someone must take responsibility for contaminating us. Instead of just studying how contaminated the earth and its occupants are and how it impacts us, we as public health professionals have a responsibility to cry foul and demand changes to chemical regulation and chemical design. We should never consider the contamination of our children or ourselves as acceptable.

Despite all these failures of US policy, the US chemical industry and federal government have taken the ostrich approach. Deny problems, fight change in Europe and ensure no dialogue happens here at the federal level in the United States. The Bush Administration and Chemical Industry were caught red handed by Congressman Frank Waxman in their efforts to derail REACH and ensure that a dialogue such as that which has happened in Europe over the past seven years on reforming chemicals regulation does not reach our shores. You know they must have their heads in the sand when even the

chemical industry's comrades in Europe think they are in the dark ages. The very industries the U.S. Administration thinks they are protecting, will soon be hurt economically. Just think General Motors vs. Toyota.

Even Canada –yes Canada– is beginning to make us look like the pariahs of global chemicals regulation. In December the Canadian government released results of a categorization of 23,000 chemicals used in that country noting that a large percentage were hazardous to health and environment and the Conservative (yes, conservative really means conservation) government has issued a strategy to restrict possibly thousands of chemicals of high concern. The Canadian's effort in part uses chemical assessment tools the US developed (see <http://www.chemicalsubstanceschimiques.gc.ca/en/>).

But there are many rays of sunshine in this bleak story of lacking U.S. leadership in protecting our health and environment from toxic chemicals. Several states and proactive and diverse advocacy coalitions within them are advancing new chemicals policy proposals. In states such as:

- Maine <http://chemicalspolicy.org/downloads/MaineExecOrder2006.pdf>
- Michigan <http://www.chemicalspolicy.org/downloads/CAGreenChemistryReport.pdf>
- Washington http://www.besafenet.com/ppc/docs/toxic_chemicals/PT_WEO.pdf
- California <http://www.chemicalspolicy.org/downloads/CAGreenChemistryReport.pdf>

and Massachusetts, among others, governments are beginning to ask tough questions about the failures of chemicals regulation and to propose solutions that would be good for health, the environment, and innovation in safer chemistry. Many leading firms that we work with, such as Dell, Interface, and SC Johnson, and Kaiser Permanente (see <http://www.cleanproduction.org/Green.Healthy.php>) are out ahead of government, undertaking their own internal efforts to understand the hazards of chemicals in their products or that they use and to pressure their supply chains to find safer alternatives.

There is a simple solution to the problem of toxic contamination of our food, communities, and bodies: take the handle off the toxics pump. This means getting good data on how chemicals are used and flow through the economy, exposures, and toxicity. It means prioritizing chemicals of concern for action. It means taking action to ensure that dangerous chemicals are substituted before we have more disease, toxic waste and lagging U.S. competition. And it means putting sufficient research and technical assistance funding into developing and implementing safer chemicals and products to stimulate "green" market development.

It is critical that the public health community decisively weigh into this debate over the future of chemicals policy, so that the US can modernize its dinosaur of a chemicals law sooner than later. Our health, our environment, and possibly our jobs depend on it.